

What is claimed is:

1. A crystal thin film made by depositing at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane on a substrate under atmospheric pressure.

2. A crystal thin film as claimed in claim 1, which is a crystal epitaxial thin film.

3. A method for producing a crystal epitaxial thin film, comprising the steps of:

vaporizing a silicon source comprising at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane under atmospheric pressure to introduce the silicon source to a substrate; and

reacting the silicon source with oxygen to deposit a crystal on a substrate.

4. A method as claimed in claim 3, wherein a catalyst is used to promote the reaction of the silicon source with oxygen.

5. A method as claimed in claim 4, wherein the catalyst is hydrogen chloride.

6. A method as claimed in claim 3, wherein the substrate has a buffer layer on which a crystal epitaxial thin film is grown.

7. A method as claimed in claim 3, wherein a deposition thickness of the crystal epitaxial thin film on the substrate is about 3  $\mu\text{m}$  per hour.